Federal State Autonomous Educational Institution for Higher Education
Peoples' Friendship University of Russia
named after Patrice Lumumba
RUDN University

Institute of Medicine

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

PEDIATRICS

course title

Recommended by the Didactic Council for the Education Field of:

31.05.03 Dentistry

field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

31.05.03 Dentistry

higher education programme profile/specialisation title

2026

1. COURSE GOAL(s)

The course "Pediatrics" is included in the specialty program "Dentistry" in the field 31.05.03 "Dentistry" and is studied in the 9th semester in the 5th year. The discipline is implemented by the Department of Pediatrics. The discipline consists of 3 sections and 18 topics and is aimed at studying and improving basic, fundamental medical knowledge in the field of pediatrics, forming the professional competencies of a doctor capable of successfully solving professional problems.

The goal of mastering the course is to train qualified doctors with theoretical and practical knowledge, skills and abilities in the field of diagnosis, emergency care, treatment tactics, medical examination and prevention of the most common diseases in children and adolescents.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The course "Pediatrics" is aimed at developing the following competencies (parts of competencies) in students:

Table 2.1. List of competences that students acquire through the course study

Competence code	**Competence descriptor**	**Competence formation indicators** (within this course)
GPC-12	Able to implement and monitor the effectiveness of medical rehabilitation of a dental patient	GPC-12.1. Develops optimal tactics for the treatment of dental pathology in children and adults taking into account the general somatic disease and further rehabilitation of the patient.
GPC-5	Able to examine patients to determine a diagnosis while carrying out professional duties	GPC-5.8. Conducts a differential diagnosis with other diseases/conditions, including urgent ones.
GPC-6	Able to prescribe non-pharmacological and pharmacological treatment, as well as monitor its efficacy and safety while performing professional duties	GPC-6.1. Develops a plan of treatment of dental disease taking into account the diagnosis, age and clinical picture in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account standards of medical care. GPC-6.6. Organizes personalized treatment of a dental patient, including elderly and senile patients, pregnant women, children with somatic pathologies; evaluates the efficacy and safety of treatment.

3.COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective* component of (B1) block of the higher educational programme curriculum.

* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
GPC-5	Able to examine patients to determine a diagnosis while carrying out professional duties	Dentist's (orthopedist) assistant; Dermatovenerology; Pediatric dentistry; Dental prosthetics (simple prosthetics); Cariesology and diseases of hard dental tissues; Local anesthesia and anesthesiology in dentistry; General surgery; Orthodontics and pediatric prosthetics; Propaedeutics of dental diseases; Dental prosthetics (complex prosthetics); Prosthetics in complete absence of teeth; Surgical diseases; Oral surgery; Maxillofacial and gnathic surgery; Internal diseases; Neurology; Periodontology; Psychiatry and Narcology; Endodontics; Ophthalmology;	Gnathology and functional diagnostics of the temporomandibular joint; Pediatric maxillofacial surgery; Maxillofacial and gnathic surgery; Maxillofacial prosthetics; Geriatric dentistry and diseases of the oral mucosa; Implantology and reconstructive surgery of the oral cavity;

		Emergency conditions in outpatient dental practice; Pathological anatomy – Pathological anatomy of the head and neck; Obstetrics;	
GPC-6	Able to prescribe non-pharmacological and pharmacological treatment, as well as monitor its efficacy and safety while performing professional duties	Dermatovenerology; Pediatric dentistry; Dental prosthetics (simple prosthetics); Immunology, clinical immunology; Cariesology and diseases of hard dental tissues; General surgery; Orthodontics and pediatric prosthetics; Dental prosthetics (complex prosthetics); Prosthetics in complete absence of teeth; Surgical diseases; Oral surgery; Maxillofacial and gnathic surgery; Fundamentals of military training. Safety of life Internal diseases; Neurology; Periodontology; Psychiatry and Narcology; Endodontics; Pharmacology; Materials Science; Obstetrics; Emergency conditions in outpatient dental practice;	Gnathology and functional diagnostics of the temporomandibular joint; Pediatric maxillofacial surgery; Implantology and reconstructive surgery of the oral cavity; Clinical dentistry; Maxillofacial and gnathic surgery; Maxillofacial prosthetics; Geriatric dentistry and diseases of the oral mucosa; Clinical pharmacology;
GPC-12	Able to implement and monitor the effectiveness of medical rehabilitation of a dental patient	Maxillofacial and gnathic surgery;	Clinical dentistry; Maxillofacial and gnathic surgery; Maxillofacial prosthetics;

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total course workload of the discipline **"Pediatrics"**s 3 credits (108 academic hours).

*Table 4.1. Types of academic activities during the periods of higher education programme mastering (**full-time training**)**

Types of academic activities		**TOTAL, academic hours**	**Semester(s)**
			9
Classroom learning, academic hours		*64*	*64*
Lectures (**LC**)		0	0
Lab work (**LW**)		64	64
Seminars (workshops/tutorials) (**S**)		0	0
Self-study, academic hours		*26*	*26*
Evaluation and assessment (exam or pass/fail grading), academic hours		*18*	*18*
Total course workload	**academic hours**	***108***	108
	credits	***3***	3

5. COURSE CONTENTS

Table 5.1. Course content (modules) according to type of academic activity

Course module title	Course module contents (topics)	Academic activities types
Module 1 Patterns of growth and development of children	**1.1.** Periods of childhood. Physical, neuropsychological and sexual development of children. Criteria of classification of childhood into periods. Criteria of assessment of normal development and its abnormalities. Features of dental treatment of children with attention deficit disorder. The criteria for the periodization of childhood are considered, along with the patterns of physical, neuropsychological, and sexual development. Indicators of normal development and signs of deviation are analyzed. The behavioral characteristics of children with attention-deficit/hyperactivity disorder are described. Approaches to the organization of dental care are defined, taking into account the patient's behavioral features.	**LW**
	1.2. Physical development The main indicators of physical development in children are characterized, along with methods for their assessment and interpretation. Centile tables and percentile curves are considered. Factors influencing growth and development are analyzed. The significance of physical development indicators in planning dental interventions is evaluated.	**LW**
	1.3. Features of the formation of the dental system in childhood The stages of development of the dentoalveolar system, as well as the timing of tooth eruption and exfoliation, are considered. The anatomical and physiological features of the hard dental tissues and jaws in children are characterized. Factors influencing occlusal development are analyzed. Clinical features relevant to dental practice are evaluated.	**LW**
	1.4. Anatomical and physiological features of the musculoskeletal system. Diseases of the musculoskeletal system (Rickets) The features of skeletal system development in children are characterized. The mechanisms of bone mineralization are considered. Clinical manifestations of rickets and its impact	**LW**

	Course module title	Course module contents (topics)	Academic activities types
		on the development of the maxillofacial region are analyzed. Diagnostic criteria and preventive measures are defined.	
Module 2	The main somatic diseases of children	**2.1.** The newborn baby. Borderline states of the newborn. Prematurity. IUGR. Perinatal CNS injury. Neonatal infections. Candidal stomatitis. Neonatal jaundice. The characteristics of the neonatal period, including transitional conditions and prematurity, are described. Perinatal lesions of the nervous system, neonatal infections, and hyperbilirubinemia are considered. The clinical manifestations of candidal lesions of the oral mucosa are analyzed. The specific features of providing dental care to newborns are evaluated.	**LW**
		2.2. The child with cough. Bronchitis, pneumonia, cystic fibrosis. Features of dental care for children with chronic bronchopulmonary diseases The main causes of cough in children, including bronchitis, pneumonia, and cystic fibrosis, are considered. Clinical manifestations and diagnostic criteria are characterized. The limitations and risks associated with dental interventions in patients with chronic bronchopulmonary diseases are analyzed.	**LW**
		2.3. Bronchial asthma. Allergic rhinitis. Atopic dermatitis. Clinical and diagnostic signs of allergic diseases of the oral mucosa in children. Bronchial asthma, allergic rhinitis, and atopic dermatitis are considered. The mechanisms of allergic inflammation are characterized. The clinical and diagnostic features of oral mucosal involvement are analyzed. The specific aspects of dental interventions in patients with allergic diseases are defined.	**LW**
		2.4. Congenital heart defects. Minor developmental anomalies. Non-rheumatic carditis. Infectious endocarditis. Antibacterial	**LW**

Course module title	Course module contents (topics)	Academic activities types
	prevention of infectious endocarditis in dental treatment. Juvenile arterial hypertension. Features of dental care for children with heart and vascular diseases. Congenital heart defects, minor developmental anomalies, non-rheumatic carditis, and infective endocarditis are considered. Clinical manifestations and the risks of complications are analyzed. Indications for antibiotic prophylaxis of infective endocarditis in the context of dental interventions are characterized. The specific features of dental treatment in this patient population are defined.	
	2.5. Diseases of the urinary system. Urinary tract infections. Glomerulonephritis. Changes in the oral cavity in chronic kidney disease. Urinary tract infections and glomerulonephritis are considered. Clinical manifestations and diagnostic criteria are characterized. Changes in the oral mucosa associated with chronic kidney disease are analyzed. The specific features of dental treatment in patients with nephrological disorders are defined.	**LW**
	2.6. Diseases of the gastrointestinal tract. Dental aspects of gastroenterological diseases. The main diseases of the gastrointestinal tract in children are considered. Clinical manifestations and diagnostic approaches are characterized. Changes in the oral cavity associated with gastrointestinal diseases are analyzed. The specific features of dental treatment in this patient population are defined.	**LW**
	2.7. Endocrine diseases. Chronic eating disorders. Diabetes mellitus. Diseases of the thyroid gland. Features of the development of the dental system in nutritional and metabolic disorders of children. Diabetes mellitus, thyroid disorders, and eating disorders are considered. Clinical manifestations and metabolic disturbances are characterized. The impact of endocrine pathology on the development of the dentoalveolar system is	**LW**

Course module title	Course module contents (topics)	Academic activities types
	analyzed. The specific features of dental treatment in patients with endocrine diseases are defined.	
Module 3 Pediatric infectious diseases	**3.1.** Exanthema: measles, rubella, parvovirus infection. The clinical forms of exanthematous infections are considered. The characteristics of disease course in children are described. Changes in the oral mucosa and their diagnostic significance are analyzed.	**LW**
	3.2. Enterovirus infections. Poliomyelitis The clinical forms of enteroviral infection and poliomyelitis are considered. The manifestations involving the oral mucosa are characterized.	**LW**
	3.3. Mumps, diphtheria The clinical manifestations of mumps and diphtheria are considered. Lesions of the salivary glands and the mucosa of the oropharynx are characterized. Diagnostic features and complications are analyzed.	**LW**
	3.4. Meningeal syndrome. Bacterial and viral meningitis. Meningococcal infection.. The clinical manifestations of meningeal syndrome are considered. Bacterial and viral meningitis are characterized.	**LW**
	3.5. Streptococcal infection. Scarlet fever. Yersiniosis. Pseudotuberculosis. The clinical forms of streptococcal infection and associated diseases are considered. Pathogenetic mechanisms and features of the clinical course are characterized. Changes in the oral mucosa are described, including typical manifestations in scarlet fever. Diagnostic features enabling the differential diagnosis of these conditions are presented.	**LW**
	3.6. Herpes infection.	**LW**

Course module title	Course module contents (topics)	Academic activities types
	The main forms of herpesvirus infections in children are considered. The mechanisms of oral mucosal involvement are characterized. Clinical manifestations are described, including various presentations of herpetic lesions. Diagnostic features relevant to clinical practice are presented.	
	3.7. Acute intestinal infections. Hemolytic uremic syndrome The etiological factors and clinical manifestations of acute intestinal infections in children are considered. The mechanisms of intoxication and dehydration are characterized. The clinical features of hemolytic uremic syndrome as a complication of the infectious process are described.	**LW**

* - created for **FULL-TIME** study only: LC – lectures; LW – lab work; S – seminars/workshops

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENT

Table 6.1. Classroom equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lab-work	A classroom designated for laboratory sessions, individual consultations, ongoing assessment, and interim evaluation, equipped with a set of specialized furniture and equipment.	Set of specialized furniture; technical equipment: NEC VT59 multimedia projector, ASUS X50M and Dell Latitude D631 laptops, there is Internet access. Software: Microsoft products (OS, office application package, including MS Office / Office 365, Teams, Skype).
Self-studies	Classroom for students' independent work (can be used for seminars and consultations),	

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
	equipped with a set of specialized furniture and computers with access to EIES.	

7. RESOURSES RECOMMENDED FOR COURSE STUDY

Main readings:

1. Robert M. Kliegman, Brett J. Bordini, Heather Toth et al. Nelson Pediatric Symptom-Based Diagnosis: Common Diseases and their Mimics. Elsevier, 2022. ISBN 978-0-323-76174-1. DOI: https://doi.org/10.1016/C2019-0-01335-0
2. Sarah S. Long. Principles and Practice of Pediatric Infectious Diseases. Elsevier, 2022. ISBN 978-0-323-75608-2. DOI https://doi.org/10.1016/C2019-0-00075-1

Additional readings:

2. Neonatal and Pediatric Cerebro-Cardiopulmonary Resuscitation / Michael Shoykhet [et al.]. 2018. 1 c. ISBN 9782889456598 URL: https://www.frontiersin.org/research-topics/4942/neonatal-and-pediatric-cerebro-cardio-pulmonary-resuscitation-ccpr
3. Wynn J.L., Bliss J.M.. The Neonatal Immune System: A Unique Host-Microbial Interface, 2018. 1 c. ISBN 9782889454037 URL: https://www.frontiersin.org/research-topics/5017/the-neonatal-immune-system-a-unique-host-microbial-interface
4. Soumen Khatua (Ed.), Natasha Pillay Smiley (Ed.). Update in Pediatric Neuro-Oncology, 2019. 1 c. ISBN 9783038975397 URL: https://www.mdpi.com/books/pdfview/book/1112.
5. Tammy M. Brady, Ibrahim F. Shatat. Pediatric Hypertension: Update, 2018. 1 c. ISBN 9782889456543 URL: https://www.frontiersin.org/research-topics/5269/pediatric-hypertension-update
6. Stefan J. Friedrichsdorf (Ed.). Pediatric Palliative Care, 2019. 1 c. ISBN 9783038973508 URL: https://www.mdpi.com/books/pdfview/book/1130
7. Carlo Caffarelli, Luis Garcia-Marcos, Kostas N. Priftis. The Parallel March of Asthma and Allergy in Childhood: A Multi-Perspective Approach, 2018. 1 c. ISBN 9782889455294 URL: https://www.frontiersin.org/research-topics/4997/the-parallel-march-of-asthma-and-allergy-in-childhood-a-multi-perspective-approach

Internet-(based) sources

1. Electronic libraries with access for RUDN students:

-Electronic library network of RUDN – ELN RUDN https://mega.rudn.ru/MegaPro/Web
- ELN "University library online" http://www.biblioclub.ru
- ELN Urait http://www.biblio-online.ru
- ELN «Student Advisor» www.studentlibrary.ru
- ELN «Znanium» https://znanium.ru/

2. Databases and search engines:
- Sage https://journals.sagepub.com/
- Springer Nature Link https://link.springer.com/
- Wiley Journal Database https://onlinelibrary.wiley.com/
- Lens.org https://www.lens.org

Learning toolkits for self - studies during the development of the discipline:

1. Course of video lectures and presentations on the discipline "Pediatrics".
2. Methodological guidelines for the implementation and execution of control and independent work on the discipline "Pediatrics".

* - All teaching materials for self- studies of students are placed in accordance with the current procedure on the discipline page in RUDN LMS TUIS.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL UPON COURSE COMPLETION

Assessment materials and grading system* for the evaluation of achieved competency levels (parts of competences) for the learning outcomes of the discipline "Pediatrics" are presented in the Appendix to this Work Program of the discipline.

* - assessment and grading systems are based on the corresponding local regulatory act of RUDN University

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